

ACQ 203
Intermediate Systems Acquisition, Part B
Syllabus

A. Course Prerequisites: ACQ 202 or ACQ 201A

B. Continuous Learning Points - 34

C. Course Manager – Matt Ambrose DAU-South

a. Phone (256) 922-8762

b. E-mail matt.ambrose@dau.mil

D. Course Description - Part B of a two-course series designed for mid-level acquisition professionals. It provides a dynamic, real-time learning environment oriented towards developing the requisite skills and knowledge to work in integrated product teams by providing an overview of systems acquisition principles, policies and processes. ACQ 203 is very broad in scope with the goal of familiarizing students with the overall defense acquisition system and how each career field contributes to a successful program.

E. Learning Methods – ACQ 203 combines short lectures with practical team based exercises designed to apply the concepts learned on line in ACQ 202.

F. Intended Audience – ACQ 203 is intended for DoD acquisition professionals seeking level II certification. Students should have two or more years of work experience in defense acquisition before attending. Students should also have a basic familiarity with acquisition terms and policies through their experience and prerequisite courses. Acquisition professionals will use the foundational knowledge from ACQ 203 at work and in further certification courses more specific to their career field.

G. Course Schedule/Outline – ACQ 203 is made up of 17 exercises that follow the second increment of the Firebird program from ACQ 202 through all 5 phases of the defense acquisition system.

ACQ 203 Course Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
0800 - 1030 Intro/Admin DAU Story	0800 - 1100 Exercise 2.1 Acquisition System & Warm Up Exercises	0800 - 0815 Assessment Review	0800 - 0900 Capstone Teamwork	0800 - 0815 Assessment Review
1030 - 1130 Exercise 1.1 IPT Leadership & Barriers	1100 - 1130 Exercise 2.2 Source Selection Planning	0815 - 0900 Introduce Capstone	0900 - 1100 Exercise 4.1 Reliability Issue	0815 - 1130 Exercise 2.1 Capstone Part 2 & 3 Acquisition Strategy Development, Presentation & Analysis
1130 - 1230 Lunch	1130 - 1230 Lunch	0900 - 0930 Exercise 3.1 TPMs	1100 - 1200 Exercise 4.2 Contract Change	
1230 - 1330 Exercise 1.2 Ethics & Acquisition	1230 - 1400 Exercise 2.2 Cont.	0930-1100 Exercise 3.2 Scheduling & Resourcing	1300 - 1400 Exercise 4.3 Problem Solving	1230 - 1400 Exercise 2.1 Capstone (Cont.)
1330 - 1600 Exercise 1.3 Intro to Lifecycle/ Materiel Solution Analysis	1400 - 1500 Exercise 2.3 Systems Eng.	1100 - 1200 Exercise 3.3 Source Sel. Process	1400 - 1600 Exercise 4.4 Supportability	1400 - 1430 Final Wrap Up / And Graduation
1600 - 1630 Daily Wrap Up (Homework)	1600 - 1700 Assessment (Homework)	1430 - 1630 Exercise 3.5 Software Interoperability	1600 - 1700 Assessment	
		1630 - 1700 Daily Wrap Up		

Exercise 1.1, Leadership & Barriers: Students determine and discuss barriers and aids to effective teamwork and team leadership.

1.1	TLO		Determine how IPT leadership concepts can be used to overcome barriers to effective teamwork, based on real world experience.
	ELO		Relate key tenets of IPPD to planning and executing an acquisition program.
	ELO		Identify the aids and barriers to successful IPT implementation.
	ELO		Identify the Supervisory, Participative and Team leadership styles.
	ELO		Describe how different leadership styles impact the effectiveness of an IPT.
	ELO		Identify the behaviors and characteristics of effective teams.

Exercise 1.2, Ethics & Acquisition: Students use scenario based discussion to apply the Principled Decision Making Model to help resolve an ethical dilemma.

1.2	TLO		Resolve an acquisition-related dilemma by prioritizing ethical values and considering how choices impact the welfare of others.
	ELO		Identify the characteristics of a "successful" defense acquisition program from a variety of perspectives.

	ELO	Identify core ethical values critical to decision making in the acquisition environment.
	ELO	Identify the steps of the Principled Decision Making Model.
	ELO	Resolve an ethical dilemma by applying the steps of the Principled Decision Making Model.

Exercise 1.3, Materiel Solution Analysis: Student teams conduct an Analysis of Alternatives to determine the best technology to use on the Firebird II program and brief the results to the class.

1.3	TLO		Evaluate alternative approaches to meet a needed capability based on affordability, schedule and technical considerations
	ELO		Given a user's requirement and selected concept, select an appropriate approach from the perspective of the system developer, to meet the requirement.
	ELO		Identify the three major dimensions of program risk used to analyze technical approaches during the Materiel Solution Analysis Phase (cost, schedule and performance)
	ELO		Identify the concept of affordability goals in relation to an acquisition program.
	ELO		Relate the concept of affordability goals to the planning of an acquisition program.
	ELO		Working in a student-led IPT, demonstrate the behaviors and characteristics of an effective team.

Exercise 2.1: Acquisition Strategy Development: Instructors conduct a review/overview of the Acquisition Life Cycle. Student teams determine the appropriate acquisition system entry point for a program based on 4 scenarios and find the errors in a top level program schedule for Firebird II. This exercise continues as the capstone to the course when the student teams develop a program schedule for the 3rd increment of the Firebird II program and brief it to the class on Friday.

2.1	TLO		Prepare an acquisition strategy program structure chart showing appropriate interrelationship(s) of the various business and technical functions involved in planning and executing the program:
	ELO		Given an acquisition program scenario with information on technology maturity, funding and JCIDS documentation, identify the correct starting point for the program in the acquisition lifecycle
	ELO		Identify the correct type of appropriated funds needed by phase and work effort
	ELO		Given an acquisition program structure chart identify the correct sequence and timing of technical reviews by phase and work effort
	ELO		Given an acquisition program structure chart identify the correct sequence and timing of developmental and operational test events by phase and work effort
	ELO		Given an acquisition program structure chart identify the correct sequence and timing of lifecycle logistics planning and execution efforts by phase and work effort
	ELO		Given an acquisition program structure chart, identify the appropriate contract types by phase and work effort
	ELO		Given an acquisition program structure chart, identify the timing of major hardware deliverables by phase and work effort
	ELO		Relate the capability documents (ICD,CDD,CPD) to the correct phases of the acquisition system
	ELO		Identify the evolutionary acquisition strategy approach
	ELO		Identify the single step acquisition strategy approach
2.1	TLO		Modify, present, and defend an acquisition strategy to accommodate a change in program funding levels
	ELO		Identify the proper response to a program funding cut
	ELO		Given a program funding cut identify the potential impacts on industry

Exercise 2.2 Source Selection Planning: Instructors conduct a review/overview of source selection process and planning. Student teams create and brief rating criteria for assigned source selection factors based on the Firebird II program scenario.

2.2	TLO		Develop portions of a source selection plan, including source selection criteria
		ELO	Identify how the Government communicates performance requirements in solicitations.
		ELO	Identify the role of various IPT members in developing the solicitation.
		ELO	Identify the purpose of evaluation criteria and how the criteria are developed.
		ELO	Develop evaluation criteria in a source selection.
		ELO	Identify methods of pre-solicitation communication with defense contractors.

Exercise 2.3, Systems Engineering Process: Instructors conduct a review/overview of the systems engineering process. Student teams participate in Stakeholder Requirements Definition, Requirements Analysis and technical management activities.

2.3	TLO		Apply the iterative SE steps to develop outputs of the systems engineering process in order to verify they meet a given requirement
		ELO	Given a summary Capability Development Document (CDD) and a system concept, determine whether the concept addresses all user requirements.
		ELO	Identify the overall purpose of the systems engineering process
		ELO	Identify the technical processes that make up the overall systems engineering process
		ELO	Identify the technical management processes used to control and manage the overall systems engineering process
		ELO	Identify the main inputs and outputs of the overall systems engineering process
		ELO	Given an acquisition scenario within an IPT environment, develop selected outputs of the systems engineering process steps.

Exercise 2.4, Test Planning: Instructors conduct a review/overview of test and evaluation types and events. Student teams identify testing types based on 6 scenarios.

2.4	TLO		Given a program schedule, explain the role of test and evaluation (DT&E, OT&E, LFT&E) in the systems engineering and acquisition management processes.
		ELO	Identify the characteristics and purposes of Developmental Test and Evaluation (DT&E)
		ELO	Identify the characteristics and purposes of Operational Test and Evaluation (OT&E)
		ELO	Identify the characteristics and purposes of Live Fire Test and Evaluation (LFT&E)
		ELO	Given a test event description, correctly identify the type of testing being accomplished
		ELO	Given a program schedule, correctly identify opportunities for combined DT/OT
		ELO	Identify the risks and benefits associated with combining DT and OT events

Exercise 3.1, Technical Performance Measures: Student teams will examine technical performance measure data and discuss the risks and possible program impact based on the Firebird II scenario.

3.1	TLO		Analyze actual verses planned technical performance data in risk areas to indicate potential problems that may prevent a system from being operationally effective and suitable.
		ELO	Identify potential risk areas based on technical performance data
		ELO	Identify the role of technical performance measures in the systems engineering process.

Exercise 3.2, Planning, Scheduling and Resourcing: Instructors conduct an overview of contractor cost pools and scheduling concepts. Student teams acting as contractors will schedule the tasks necessary to complete a design modification within given cost and schedule constraints and determine their critical path.

3.2	TLO		Given a segment of contract work and associated tasks, plan the tasks and resources necessary to complete contract work within cost and schedule constraints.
	ELO		Apply the fully burdened rate to labor hours to correctly calculate contractor's costs
	ELO		Distinguish correctly between direct and indirect costs on a contract
	ELO		Given a simple Gantt chart with defined task relationships, identify the critical path
	ELO		Given a completed Gantt chart with the critical path identified, identify cost and schedule risks in the plan
	ELO		Given a completed Gantt chart with the critical path identified, explain cost and schedule risks in the plan

Exercise 3.3, Source Selection Process: Student teams will determine and brief contractor proposal technical factor ratings based on the factor rating criteria developed in exercise 2.2. Student teams will make a best value recommendation to the source selection authority based on all proposal rating factors.

3.3	TLO		Select a best value contractor by comparing contractor proposals and test results to source selection criteria
	ELO		Apply evaluation criteria in a source selection.
	ELO		Identify the best value approach to source selection
	ELO		Apply a selected quantitative tool (e.g. decision matrix) to resolve a problem

Exercise 3.4, Contractor Performance Analysis: Instructors conduct a review/overview of earned value management. Student teams evaluate earned value and technical performance data to determine cost, schedule and technical risks for the Firebird II program.

3.4	TLO		The student will be able to analyze contractor performance indicators to identify trends and problems
	ELO		Given earned value data calculate cost variance, schedule variance, cost performance index and schedule performance index
	ELO		Given cost variance, schedule variance, SPI & CPI explain the program's cost and schedule status

Exercise 3.5, Software Interoperability: Instructors conduct a review/overview of interoperability and cybersecurity principles. Student teams analyze the risks and functional area impacts of an assigned approach to meeting a new interoperability requirement. The teams then brief their analysis including practical methods to implement cybersecurity for their approach.

3.5	TLO		Given a scenario, apply key software acquisition management principles needed to make sound decisions for planning and executing an acquisition program.
	ELO		Recognize the importance of fully integrating cybersecurity into programs early and throughout the system lifecycle.
	ELO		Identify "Best Practices" that may be appropriate for the acquisition of software-intensive systems.
	ELO		Identify the aspects of the Net Ready KPP as it applies to acquisition of Information Technology (e.g. interoperability, architecture, information assurance).
	ELO		Identify the benefits and risks associated with using Commercial Off The Shelf (COTS) software
	ELO		Explain the relationship between software development activities and the systems engineering process.
	ELO		Explain the impact of a new requirement on various functional areas
	ELO		Identify the impacts of a new program requirement on the following functional areas: Program Management, Systems Engineering, Contracting, Lifecycle Logistics, Financial Management, Software Acquisition Management, & Test and Evaluation

Exercise 4.1, Reliability Issue: Student teams will analyze 3 possible ways to resolve a reliability problem from the perspective of all functional areas then brief a support a recommendation as to the best course of action.

4.1	TLO		Analyze a reliability problem from multiple perspectives and select and defend a solution
		ELO	Explain the interrelationship between selected functional areas (e.g., contracting, finance, systems engineering) and acquisition logistics.
		ELO	Explain why it is important to influence system design for supportability.
		ELO	Explain the relationship of Reliability, Availability, and Maintainability (RAM) to Acquisition Logistics, and its impact on system performance, operational effectiveness (including support), logistics planning, and life-cycle cost.
		ELO	Identify and the impacts of a supportability problem on the following functional areas: Program Management, Systems Engineering, Contracting, Lifecycle Logistics, Financial Management, Quality Assurance & Manufacturing, & Test and Evaluation
		ELO	Explain how instability of requirements, design, and production processes impact program cost and schedule.

Exercise 4.2, Contract Change: Student teams discuss an unauthorized commitment situation and determine the proper ways to execute and fund a contract change.

4.2	TLO		Recognize an unauthorized commitment situation and avoid giving inappropriate direction to a contractor.
		ELO	Explain the interrelationship between selected functional areas (e.g., life cycle logistics, finance, systems engineering) and contracting.
		ELO	Identify the causes and consequences of unauthorized commitments.
		ELO	Identify the complementary roles and responsibilities of the contracting officer and the program manager in their partnership throughout the acquisition process.
4.2	TLO		Given a scenario, apply the procedures, rules and public laws associated with the execution of DoD budgets.
		ELO	Identify the public laws (i.e., Misappropriation Act, Anti-deficiency Act, Bona Fide Need Rule) that apply to the use of appropriated funds in DoD acquisition.
		ELO	Select the appropriate public law (i.e., Misappropriation Act, Anti-deficiency Act, Bona Fide Need Rule) that applies to the use of appropriated funds under specific circumstances.

Exercise 4.3, Problem Solving: Student teams conduct brainstorming and root cause analysis to determine the possible cause of a system malfunction.

4.3	TLO		Analyze the elements of manufacturing as they relate to a systems performance problem using a qualitative tool (cause and effect/fishbone diagram)
		ELO	Identify the elements of manufacturing (5Ms).
		ELO	Explain the considerations/concerns of the elements of manufacturing (5Ms) and how other areas are affected.
		ELO	Explain the impact of manufacturing on cost, schedule and performance.
		ELO	Explain the use of the 5 Whys root cause determination method in identifying potential root causes
		ELO	Explain the multi-voting technique to narrow large lists of possibilities into smaller, more manageable, lists

Exercise 4.4, Supportability Issue: Student teams create, brief and support a long term solution to a supportability problem caused by obsolescence. The teams analyze their solution's impact on the acquisition career fields and propose a performance based metric to increase supportability for the warfighter.

4.4	TLO		Analyze the impact of supportability issues on system readiness/performance and other functional areas. E.g. contracts, finance, systems engineering and acquisition logistics
		ELO	Synthesize several approaches to solving a program supportability issue (obsolescence).
		ELO	Evaluate approaches to solving a program supportability issue (obsolescence).
		ELO	Recommend the best to solving a program supportability issue (obsolescence).
		ELO	Identify the proper DoD Appropriation Category to be used to budget for each of the three phases of a Product Improvement Program.
		ELO	Assess the impact of the failure to execute funds in accordance with program plans.
		ELO	Recognize how configuration management impacts all functional disciplines (e.g., test, logistics, manufacturing, etc.)
		ELO	Demonstrate the interrelationship between selected functional areas, e.g., contracting, finance, systems engineering, and life cycle logistics.
		ELO	Identify tools/best practices/techniques available in the systems engineering process to achieve the principal goals of supportability analyses.
		ELO	Apply performance based metrics to a program supportability problem (e.g. obsolescence)
		ELO	Apply performance or outcome based logistics principles to solving a program obsolescence issue.

H. Course Materials – All materials needed for the course are provided in the classroom. Each student will receive:

- 1) A student book with materials for each exercise, course presentation slides and ACQ 202 lesson summaries
- 2) A Defense Acquisition Lifecycle Chart
- 3) A DAU Funds Management Platinum Card
- 4) DAU Earned Value Management Gold

Each team of 6 students will receive:

- 1) A DAU glossary of acquisition terms
- 2) A DoD Directive 5000.01, The Defense Acquisition System
- 3) A DoD Instruction 5000.02, Operation of the Defense Acquisition System

All of these materials are available for download and preview at https://myclass.dau.mil/bbcswebdav/xid-1536256_4 . There is no pre-class work required other than completion of ACQ 202. You will complete the exercises in the student book as part of a team during class. Monday evening of the week of class you will be asked to read an excerpt from the DoDI 5000.02 printed for you in the student book.

I. Student Assessment: Students will be assessed on a pass/fail basis according to the following criteria.

Students must achieve at least 80% mastery of the ACQ 203 learning objectives in order to pass the entire course. Should you not achieve the required 80% overall, you will be required to repeat ACQ 203. ACQ 203 classroom performance assessment is based on these factors.

1) Objective Assessments (70 Points) - Content and Analysis Questions. On the second and fourth day of class, you will answer some multiple choice questions based on the material covered in ACQ 203. All assessments are individual efforts. You are encouraged to refer to your notes, lesson summaries, and other written references. Each assessment contains 15 questions and is worth 35 points

2) Participation (30 Points) - Class participation will be assessed through instructor observation of teamwork, leadership and discussions. You are expected to be in class on time, actively participate in group and class discussions, and rotate leadership responsibility among the members of your team. Behavior that could cause a student to lose participation points includes but is not limited to: tardiness, lack of attention, texting, sidebar conversations and disruption of class or team exercises and discussions.

3) Briefing - Each student is required to give a 5-10 minute briefing for their team. The briefing is a requirement for graduation but is not graded for points. This is an opportunity to develop and practice your briefing skills in a low threat environment.

4) Attendance - Attendance all 5 days is mandatory for graduation. Under special circumstances, such as a medical emergency, you may be excused from the course for up to two hours with the instructor's permission. (Early flights on Friday are not considered a valid reason to miss class.)

J. Academic Policies – DAU standard academic policies apply to ACQ 203. You can review these policies in detail at this link www.dau.mil/training/Pages/studentinformation.aspx .